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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,779	02/18/2004	Hirotaka Niiya	3693-50	1108

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EXAMINER	
CHEN, WEN YING PATTY	
ART UNIT	PAPER NUMBER
2871	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/779,779	NIIYA, HIROTAKA	
	Examiner	Art Unit	
	W. Patty Chen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 16-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 16-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's Amendment filed on Oct. 19, 2006 has been entered. Claims 2-15 are cancelled and claims 16-24 are newly added per the Amendment filed. Therefore, claims 1 and 16-24 are now pending in the current application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 and 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (US 2002/0109811) in view of Ozawa et al. (US 2003/0076464) further in view of Ha (US 6919945).

With respect to claim 1 (Amended): Park et al. disclose in Figures 11A-11E a semi-transmissive display apparatus, in which a plurality of pixels, each including a transmissive region and a reflective region (as shown), are arranged in a matrix pattern, the apparatus comprising:

a device substrate (element 111) including, for each of the plurality of pixels, a transparent pixel electrode (element 157) provided in at least the transmissive region, a reflective plate (element 153) provided in the reflective region, and a switching device (element T);

a counter substrate including a common counter electrode (as shown in Figure 1 and described in Paragraph 0005) and opposing the device substrate; and a

a display layer interposed between the device substrate and the counter substrate (as shown in Figure 1 and described in Paragraph 0005),

a first insulating layer (element 149) covering the switching device and extending to at least the transmissive region; and

a second insulating film (element 154) provided in at least the reflective region so as to adjust the thickness of the display layer in the reflective region compared to the transmission region.

Park et al. fail to disclose that a color filter layer is provided covering at least part of the reflective plate and being a ground film of the transparent pixel electrode in at least the transmissive region and that the reflective plate is being provided over the switching device via the first insulating film so as to function as a light-blocking film over at least part of the switching device.

However, Ozawa et al. disclose in Figure 1B that a color filter (element 81, 82) is formed over a reflective plate (element 4) but under a second insulating film (element 6) for adjusting the thickness of the display layer and Park et al. disclose in another embodiment shown in Figure 9C that the reflective plate (element 147) is formed over the switching device (element T) via the first insulating film (element 143).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a semi-transmissive display apparatus as taught by Park et al. wherein a color filter layer is provided on the device substrate and disposed between the reflective plate and the second insulating film as taught by Ozawa et al., since Ozawa et al. teach that a high quality color display can thus be achieved (Paragraphs 0064-0065 and 0068-0069) and that by forming the reflective plate over the switching device allows the reflective plate to help in prevent light from incident upon the channel region of the switching device, thus ensuring proper switching device function, as taught by Ha (Column 5, lines 50-59).

As to claim 16 (New): Park et al. further disclose in Figures 11A-11E that the transparent pixel electrode (element 157) is provided on the second insulating film (element 154) and is electrically connected to the switching device (element T) via a contact hole (element 150b) formed in at least the color filter (since Ozawa et al. teach that the color filter is formed between the reflective plate and the second insulating film, therefore, it is obvious to form a contact hole through both the second insulating film and the color filter).

As to claim 17 (New): Park et al. further disclose in Figures 11A-11E that the reflective plate (element 153) is not electrically connected to the switching device and is not electrically connected to the transparent pixel electrode.

As to claim 18 (New): Park et al. further disclose in Paragraphs 0057 and 0059 that the first insulating film is an inorganic film, and the second insulating film is an organic film.

As to claim 19 (New): Park et al. further disclose in Figure 9C that a profile of the reflective plate (element 147) is substantially conformal to a profile of the upper surface of the switching device.

As to claim 20 (New): Park et al. further disclose in Figure 9C that the reflective plate (element 147) overlaps semiconductor material (element 134) of the switching device as viewed from above.

As to claim 21 (New): Park et al. further disclose in Figures 11A-11E that the first insulating film (element 149) does not contact a glass substrate (element 111) which supports the same in an area under the transparent pixel electrode (element 157).

As to claim 22 (New): Park et al. further disclose in Figures 11A-11E that no portion of the reflective plate (element 153) extends below an upper surface of the first insulating film (element 149).

As to claim 23 (New): Park et al. further disclose in Figures 11A-11E that the second insulating film (element 154) causes the thickness of the display layer to be significantly thinner in the reflective region than in the transmissive region.

As to claim 24 (New): Park et al. further disclose in Figures 11A-11E that the second insulating film (element 154) is provided in at least a substantial part of the reflective region for causing the display layer to be thinner, but is not provided in a substantial part of the transmissive region.

Response to Arguments

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. Patty Chen whose telephone number is (571)272-8444. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

W. Patty Chen
Examiner
Art Unit 2871

WPC
12/29/06

ANDREW SCHECHTER
PRIMARY EXAMINER